ABSTRACT OF THE DISCLOSURE

A pneumatic tire has a carcass structure having at least one carcass ply and at least one annual reinforcing structure associated with the carcass ply, a tread band made of an elastomeric material at a radially outer position with respect to the carcass structure, a belt structure interposed between the carcass structure and the tread band and a pair of axially opposite side walls on the carcass structure, wherein the tread band has i) at least one first sector, radially extending, substantially of a first elastomeric material; ii) a plurality of second sectors radially extending, positioned at axially opposite sides of the at least one first sector and substantially of a second elastomeric material; iii) at least one longitudinal groove formed in the at least one first sector and extending substantially for the entire circumferential development of the tread band, wherein the first elastomeric material has a modulus of elasticity under compression at 23°C greater than the modulus of elasticity under compression at 23°C of the second elastomeric material, and wherein the modulus of elasticity under compression at 23°C of the first elastomeric material is about 20 to about 80 MPa.